Diagnostic Trouble Codes (DTC) P2080, P2084, P242B Lighting The Malfunction Indicator Lamp (MIL) - US14+OBD16, US17+OBD16, And US17+OBD18 Emissions, Model Years 2017 To 2019

Internal Content

WARNING
No parts should be replaced for these fault codes unless a definite sensor failure is found.

Fault Tracing Procedure:

1. Allow the vehicle to sit until the engine and exhaust have reached ambient (air) temperature.

2. Turn the ignition to ON, engine OFF.

2. Using Premium Tech Tool (PTT), run either of the operations below:

- 2545-08-03-02 Exhaust Aftertreatment Diagnostics, option A
  - This will provide a numerical view of exhaust temperatures.

- 2589-08-03-02 Exhaust Aftertreatment System, Service Regeneration

  - This will provide a graphical view of exhaust temperatures.

3. Ensure that the sensor readings are within 10 °C (18 °F) of one another before starting the engine.

4. Start the engine.

5. Monitor exhaust temperatures on PTT:

- The sensor temperatures should rise in the order of 1, 2, 3 as shown below after starting the engine.

6. Evaluate results:

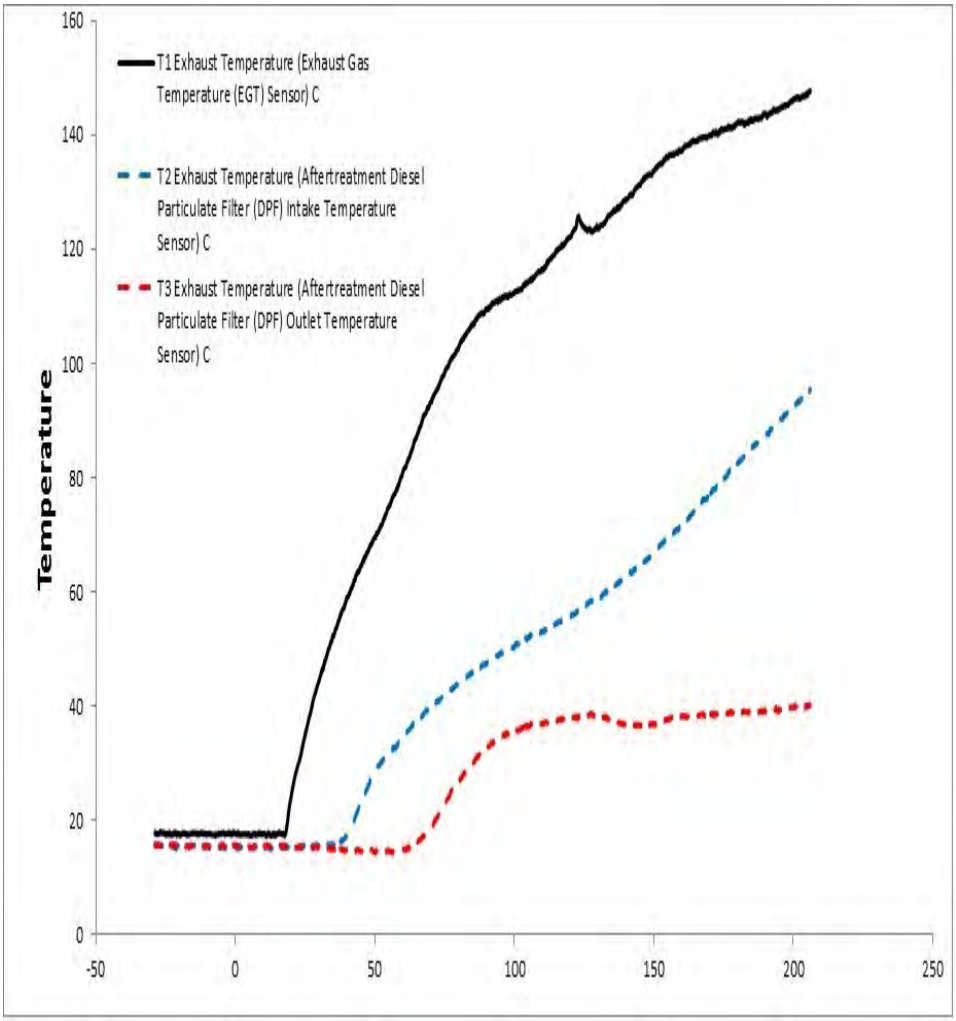
Live UI

- **If the sensor readings are equal at ambient temperature and rise**

in the correct order when the engine is running: No further fault tracing should be performed. Clear the DTCs and return the vehicle to service.

- **If one or more sensors are displaying a different reading from the others or are spiking instead of smoothly increasing with the engine running:** The sensor(s) should be suspected to be faulty.
- **If the temperature sensor values rise out of order:** The sensors should be checked to ensure they are installed in the correct positions.

An example of proper temperature sensor function can be found below:



This CBR will be updated when new information is available.

Live UI

Tags

k03573329 p2080-64 p2084-64 p242b-64

p208064 p208464 p242b64 mack volvo

Related links and attachments

No links or attachments available

Feedback

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Live UI

Tech Tool

Tech Tool Links Help

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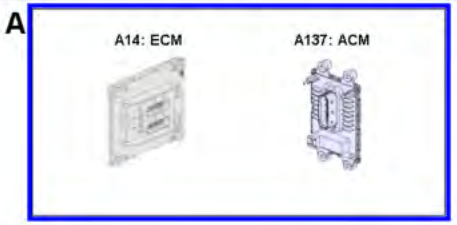
Product Product History Diagnose Test Calibrate Program

A



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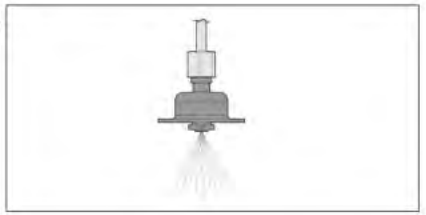
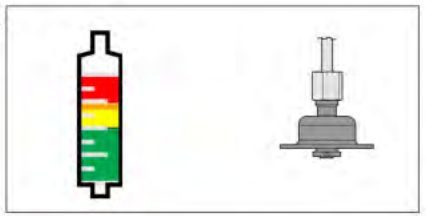
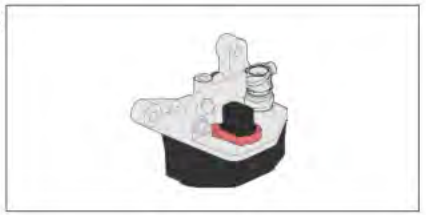


C



D



2545-08-03-02 Exhaust Aftertreatment Diagnostics

Simulation

Information >> Conditions >> Execution

Purpose

Check the function of the exhaust aftertreatment system (DPF)

Ash and soot level reset

Description

This operation allows monitoring of system conditions, activation of components and reset of system values.

Selections

Select the illustration corresponding to the method or test to be performed.

A

Sensor Values, Monitoring

B

Aftertreatment hydrocarbon doser air flow test

C

DPF System Reset

- AHD Adaptive Factor
- Soot Level

D

Active Diagnostics Test

- The "Active Diagnostics Test" is self-test of the dosing control system
- Aftertreatment Hydrocarbon Dosing Module

Continue > Cancel

Chassis ID: N 973665 VIN: 4V4N39EH3GN973665 Work Order: 89898

Product Offline

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Tech Tool

Tech Tool Links Help

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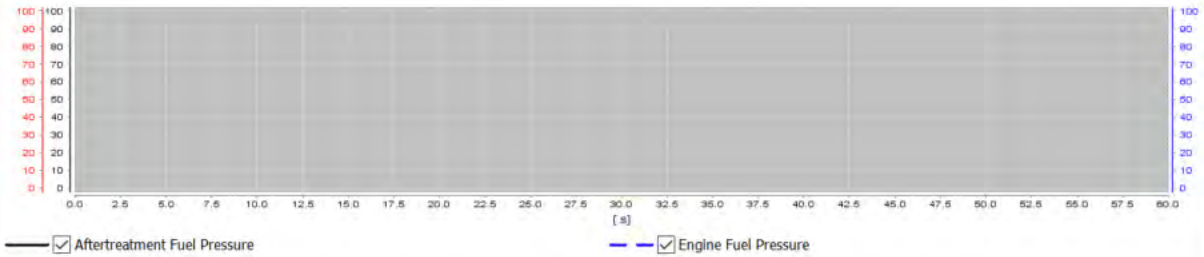
Product **Product History** **Diagnose** **Test** **Calibrate** **Program**

Pressure sensor



Aftertreatment Fuel Pressure

Engine Fuel Pressure

DPF Differential pressure

Exhaust gas temperature sensor

Other sensors

2545-08-03-02 Exhaust Aftertreatment Diagnostics

Simulation

Information >> Conditions >> **Execution**

Service information can be found at the following link(s):

Intake and exhaust system, Function description

Action

- Ignition Key ON and Engine OFF
- Read out the status of the operating conditions
- Start the engine
- Check that all signals and values are stable and without abnormal deviations
- Check that all signals are displaying realistic values according to the actual conditions

Pressure sensor

0 psi	Aftertreatment Fuel Pressure
51 psi	Engine Fuel Pressure
0.7 psi	DPF Differential pressure

Exhaust gas temperature sensor

Other sensors

Test result

Select one of the following alternatives

- OK
- Not OK

Restart the operation

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Product Product History Diagnose Test Calibrate Program

A DPF 20 - 60 minute(s)

B SCR 30 - 90 minute(s)

2589-08-03-02 Exhaust Aftertreatment System, Service Regeneration

Simulation

Information >> Conditions >> Execution

Purpose

- Perform a service regeneration (DPF)
- Perform DEF crystal sublimation
- Check that the regeneration functions properly
- Prepare particulate filter for ash cleaning

Selections

Select the illustration corresponding to the method or test to be performed.

A - 2545-08-03-03 Diesel Particulate Filter Service Regeneration

- This operation is used to perform a "service regeneration" of the diesel particulate filter (DPF).
- During engine operation, the DPF becomes loaded with soot. Regeneration of the DPF takes place during engine operation in order to remove the soot.
- If the soot level becomes greater than what can be removed by the normally-occurring regeneration process, service regeneration may be needed. Service regeneration may also be needed to prepare the filter for ash cleaning.

B - 2585-11-03-03 SCR, Diesel Exhaust Fluid, Crystal Sublimation

- Under certain circumstances, the SCR catalyst may become loaded with DEF crystals. These deposits develop when the DEF is injected in cold duty cycles in which the SCR catalyst does not reach the proper temperature needed for chemical reaction. If the crystallization level becomes greater than that which can be removed by normal engine operation, manual regeneration may be needed.
- In this process the solid crystals are converted to a gaseous state. This conversion is performed by heating the SCR unit to a temperature that causes the conversion of the crystals to occur, thereby removing them from the system.
- Heating of the SCR catalyst is accomplished by heating of the diesel particulate filter (DPF), similar to the DPF regeneration except that the temperatures are higher and it can take longer time.

Continue > Cancel

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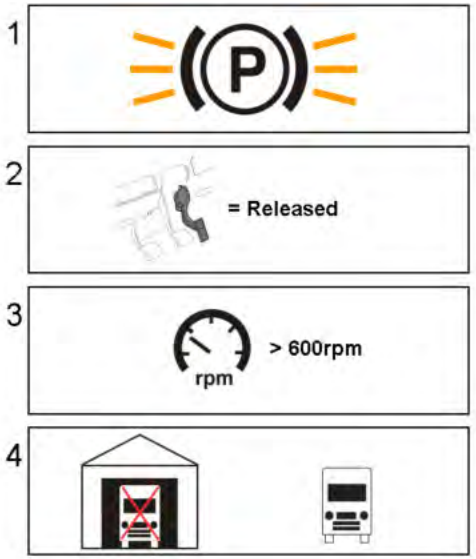
Product Product History Diagnose Test Calibrate Program



2589-08-03-02 Exhaust Aftertreatment System, Service Regeneration

Simulation

Information >> **Conditions** >> Execution

Manual conditions

1. Parking brake applied
2. Accelerator pedal (AP) released
3. Engine running
4. Vehicle outdoors in a suitable area

☑ Confirmed

Continue > Cancel

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Tech Tool

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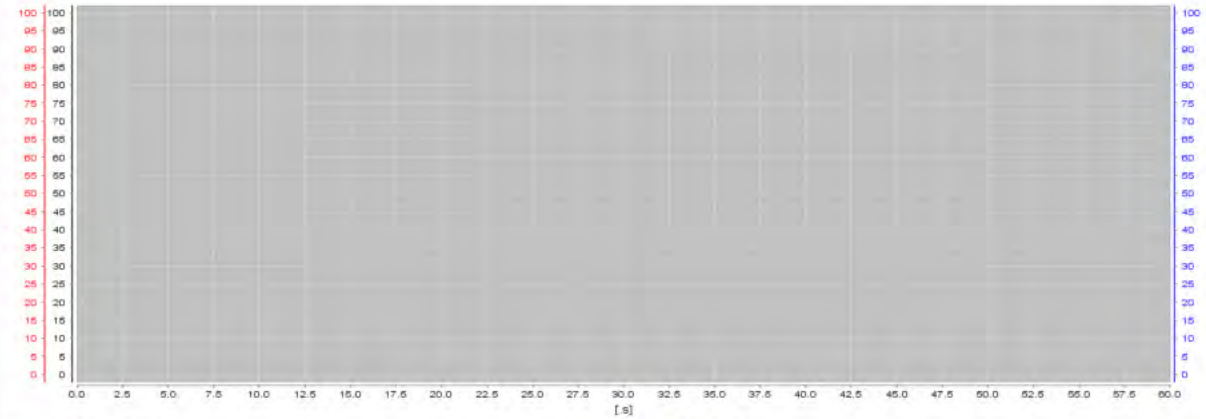
Product **Product History** **Diagnose** **Test** **Calibrate** **Program**

DPF Regeneration activation (Soot)

Percentage completed (0 - 100 %)

0%

Exhaust gas temperatures



Exhaust Aftertreatment - Group 1

Exhaust Aftertreatment - Group 2

Exhaust Aftertreatment - Group 3

Engine - Group 1

Engine - Group 2

Engine - Group 3

Engine - Group 4

2589-08-03-02 Exhaust Aftertreatment System, Service Regeneration

Simulation

Information >> Conditions >> **Execution**

Information

Action

Note: The process can be stopped at any point by selecting the stop button

Start the regeneration by pressing the play button

Allow the operation to continue until it is complete. When the process is complete the engine speed will return to normal idle speed. At this point, the engine should be allowed to run until the system has cooled down 2 - 3 minute(s).

The progress bar may not start immediately when the engine speed increases; it can take several minutes due to the exhaust aftertreatment system is not hot enough

Exhaust gas temperatures

Exhaust Aftertreatment - Group 1

Exhaust Aftertreatment - Group 2

Exhaust Aftertreatment - Group 3

Engine - Group 1

Engine - Group 2

Engine - Group 3

Engine - Group 4

Restart the operation

Continue >

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